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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/820,858	03/30/2001	David W. Cannell	05725.0844-00	3869

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EXAMINER

FUBARA, BLESSING M

ART UNIT PAPER NUMBER

1618

DATE MAILED: 07/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/820,858

Applicant(s)

CANNELL ET AL.

Examiner

Blessing M. Fubara

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 18 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-30,32 and 34-150 is/are pending in the application.
- 4a) Of the above claim(s) 10-12,21-23,27,28,30,32,34,36 and 49-150 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9, 13-20, 24-26, 29, 35 and 37-48 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |



### **DETAILED ACTION**

Examiner acknowledges receipt of request for reconsideration, request for extension of time and remarks, all filed 05/18/05.

Upon further consideration in response to the request for reconsideration, the finality of the Office Action mailed 02/04/2005 is withdrawn. New Matter rejection below addresses the new matter introduced into the claims in the amendment filed 10/04/04.

#### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-9, 13-20, 24-26, 29, 35 and 37-48 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The recitation that the amino groups of the polysaccharides are unsubstituted is new matter since the specification as originally filed requires that at least one amino group be unsubstituted. Applicants have not pointed to the specification upon which the support for the new matter derives support. Upon removal of the new matter the rejection below applies.

#### ***Claim Rejections - 35 USC § 102***

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

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4. Claims 1-9, 16, 17, 19, 20, 24-26, 29, 35, 45, 46 and 47 are rejected under 35 U.S.C. 102(b) as being anticipated by Claims Gruber (US 5,597,811).

Gruber teaches a composition comprising water-soluble polyglucosamine derivatives (abstract and column 2, lines 17-27). In the background, Gruber discloses that polyglucosamines are polysaccharides that have glucose monomer units having amine groups and examples are chitin, chitosan and polyglucosaminoglycans (column 1, lines 13-24). One preferred end use for Gruber's composition is in personal care compositions formulated as skin creams, lotions, cleansing products, conditioners, hairsprays, mousses and gels (column 7, lines 62-66). The personal care compositions also include personal care ingredients such as vitamins, oils, alcohols, glycerine, sorbitol, fragrances, preservatives and surfactants (column 8, lines 1-14). Gruber further teaches that typical cleaning compositions contain surfactants (column 8, lines 28-36), typical aerosol and non-aerosol compositions contains low molecular weight alcohol, methacrylate copolymer, dimethicone copolyol and aminomethyl propanol (column 8, lines 37-43), typical creams contain mineral oil, water, methyl glucose sesquistearate, isopropyl palmitate and carbomer stabilizer (column 8, lines 44-49), typical mousses contain surfactant, isopropyl palmitate and polyquaternium-10 or poly(vinylmethacrylate)/methacrylate copolymer (column 8, lines 50-54) and a typical gel contains the ingredients listed in column 8, lines 55-59).

In the broadest sense, polyglucosamine has many glucosamine units, and regarding instant claim 1, effective amount is any amount of the composition, and future intended use is not critical in a composition claim and the comprising language of the instant claims allows for the presence or incorporation of other ingredients.

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The broad scope of the claims is encompassed in Gruber and Gruber thus meets the limitations of the claims. Claim 1 does not recite glucosamine or polyquaternium 10. Applicants are relying on limitations not recited in the claims. Polyglucosamine is a polysaccharide and is a derivative of glucosamine.

***Claim Rejections - 35 USC § 103***

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claims 1-9, 13-20, 24-26, 29 and 37-48 rejected under 35 U.S.C. 103(a) as being unpatentable over Dunlop et al. (US 2002/0102228) in view of Gruber (US 5,597,811) and further in view of Yoshihara et al. (US 5,332,581).

Dunlop discloses anti-dandruff conditioning shampoo compositions and said compositions comprise anionic surfactants, conditioning agents, anti-dandruff agents, cationic polymers and water (abstract and section [0015] and [0022]). Zwitterionic surfactant is one of the surfactants in the anti-dandruff conditioning shampoo ([0025]). Silicone oils and cationic silicones are few examples of conditioning agents in the anti-dandruff conditioning shampoo of Dunlop ([0046] and [0049]). A soluble anti-dandruff agent in Dunlop is ketoconazole ([0018]). Cationic polymers in the anti-dandruff conditioning shampoo of Dunlop are cationic polysaccharides and one of the cationic polysaccharide listed in glucosamine amine sugar ([0127-0144]). Dunlop states that mixtures of cationic polysaccharides can be used and polyquaternium 10 is preferred cationic celluloses ([0144 and 0148]).

Optional components in Dunlop are additional surfactants, where the surfactant is based on quaternary ammonium moiety having counter ions selected from halogens, acetate, citrate,

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lactate, glycolate, phosphate nitrate, sulfate and alkyl sulfate radicals ([0178 and 0179]), suspending agents such as xanthan gum ([0189]), polyalkylene glycols ([0173]), hair growth regulating agents such as vitamins ([0213]), and other optional agents such as anti-static agents are incorporated into the anti-dandruff conditioning shampoo ([0218]).

Dunlop discloses a composition that encompasses most aspects of the claimed invention except that Dunlop is silent as it relates to the heat activation step of claim 48.

But Yoshihara et al. (US 5,332,581) discloses hair treatment composition anionic surfactants, one or more cationic polymers selected from cationic starch, cationized guar gum derivatives, diallyl quaternary ammonium salt/acrylamide copolymers, silicone derivatives, and dyes (columns 3 and 4, column 5, lines 1-26). Yoshihara teaches that it is desirable that the composition is applied to the hair, heated at 30-50 °C for 10-35 minutes and then washed away to further achieve improved effects (column 5, lines 52-57).

Yoshihara is thus relied upon for the heat activation step of claim 28 and Gruber is relied upon for disclosing a composition that comprises glucosamine and polyquaternium-10.

As it relates to claims 14, 15, 43 and 44, amounts of quaternary ammonium groups represents optimization of the composition and “[w]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum workable ranges by routine experimentation.

As it relates to a composition comprising glucosamine and polyquaternium-10, Dunlop suggests that mixtures of cationic polysaccharides can be used and one of the preferred cationic celluloses is polyquaternium 10 ([0144 and 0148]) while listing glucosamine amine sugar as a cationic polysaccharide. Therefore, it would have been obvious to one of ordinary skill in the

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art at the time the invention was made to prepare the anti-dandruff conditioning shampoo of Dunlop where the composition comprises both glucosamine amine sugar and polyquaternium-10 since Gruber teaches hair composition that comprises both quaternary ammonium compounds. One having ordinary skill in the art would have been motivated to apply the conditioning shampoo of Dunlop to hair and heat at 30-50 °C for 10-35 minutes because Yoshihara teaches heat activation step.

The broad scope of the claims is encompassed in Gruber and Gruber thus meets the limitations of the claims. Claim 1 does not recite glucosamine or polyquaternium 10. Applicants are relying on limitations not recited in the claims. Polyglucosamine is a polysaccharide and is a derivative of glucosamine.

7. Claims 14, 15, 39-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gruber (US 5,597,811) in view of applicants admitted prior art.

Gruber clearly teaches hair care composition comprising polyglucosamine derivatives, surfactant, isopropyl palmitate and polyquaternium-10 or poly(vinylmethacrylate)/methacrylate copolymer but fails to teach that the composition may comprise at least one additional sugar. But applicants on page 3, lines 5-15 of the specification admit that sugars and sugar derivatives are added to hair care compositions and specifically that sugars improve the tactile and elastic properties of natural hairs and helps the hair to retain moisture. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include sugars to the composition of Gruber because adding sugars to the hair composition of Gruber would improve the tactile and elastic properties of the hair and also help the hair to retain moisture according to applicants' admitted prior art.

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As it regard to claims 14, 15, 43 and 44, amounts of quaternary ammonium groups represents optimization of the composition and “[w]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum workable ranges by routine experimentation.

The combination of Gruber and applicants’ admitted prior art is proper because Gruber discloses polysaccharides and the proviso recited in the amended claim does not overcome the rejection.

***Response to Arguments***

8. Applicants’ arguments filed 05/18/05 have been fully considered but they are not persuasive.

Regarding applicants’ argument that Gruber does not disclose composition comprising at least one compound comprising at least two quaternary ammonium groups and at least one compound comprising at least one C5 to C7 polysaccharide where the amino groups are unsubstituted, it is respectfully noted that “the amino groups are unsubstituted” is a new matter and the rejection applies upon the removal of the new matter. Secondly, Gruber in column 8, lines 50-53, discloses that typical mousses contain water or alcohol, surfactant, isopropyl palmitate and polyquaternium-10 resin. Thus one does not pick and choose from isolated passages to establish anticipation where there is a clear disclosure that a mousse formulation contains water or alcohol, surfactant, isopropyl palmitate and polyquaternium-10 resin in addition to the polysaccharide.



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Regarding applicants' argument that Gruber discloses only polyglucosamine derivatives, it is noted that Gruber does not indicate derivatization of all the amino groups in the glucosamine, and upon removal of the new matter at least one amino group will be unsubstituted.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Blessing M. Fubara whose telephone number is (571) 272-0594. The examiner can normally be reached on 7 a.m. to 3:30 p.m. (Monday to Friday).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thurman K. Page can be reached on (571) 272-0602. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Blessing Fubara  
Patent Examiner  
Tech. Center 1600

A handwritten signature in black ink, appearing to read "Blessing Fubara", is written over the printed name of the examiner.